## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:  $\frac{10/660,434}{50 \text{ TC}}$ Date Processed by STIC:  $\frac{13/6}{307}$ 

## ENTERED



IFW16

RAW SEQUENCE LISTING DATE: 01/03/2007 PATENT APPLICATION: US/10/660,434 TIME: 16:41:39

Input Set : F:\7570.APP

Output Set: N:\CRF4\01032007\J660434.raw

3 <110> APPLICANT: GLINSKII, GUENNADI V. 5 <120> TITLE OF INVENTION: GENE SEGREGATION AND BIOLOGICAL SAMPLE CLASSIFICATION METHODS 7 <130> FILE REFERENCE: 23543-07570US 9 <140> CURRENT APPLICATION NUMBER: 10/660,434 10 <141> CURRENT FILING DATE: 2003-09-10 su pro? 12 <150> PRIOR APPLICATION NUMBER: 60/410,018 13 <151> PRIOR FILING DATE: 2002-09-10 15 <150> PRIOR APPLICATION NUMBER: 60/411,155 16 <151> PRIOR FILING DATE: 2002-09-16 18 <150> PRIOR APPLICATION NUMBER: 60/429,168 19 <151> PRIOR FILING DATE: 2002-11-25 21 <150> PRIOR APPLICATION NUMBER: 60/444,348 22 <151> PRIOR FILING DATE: 2003-01-31 24 <150> PRIOR APPLICATION NUMBER: 60/460,826 25 <151> PRIOR FILING DATE: 2003-04-03 27 <160> NUMBER OF SEO ID NOS: 2340 29 <170> SOFTWARE: PatentIn version 3.3 31 <210> SEQ ID NO: 1 32 <211> LENGTH: 4716 33 <212> TYPE: DNA 34 <213> ORGANISM: Homo sapiens 36 <400> SEQUENCE: 1 37 gtgggatttg gggggcgctg gtgggcaccc ctggatctgg cggctgcggc ctcgcggggg 60 39 gaggetgate ggtgacaggg geaggggget attttggggg tagaaggeag tgagagegtg 120 41 agggggaggg gggtccccaa cgcccaagcc ggagccagag acgcggagcc cgcgcgagcg 180 43 teggagacag ggetecaggg etecgaageg acagageegg geeceggeeg etgecagggg 240 45 ccccgcccgg ccccccact ccaccccacg tccctcctgc agcccagctc cgcccgcagc 300 47 cgccgcggac caggcaggcc cgcaccgccg ccatgatgtg cgaggtgatg cccaccatca 360 49 gcgaggatgg ccggcggggc tcggcgctgg gcccggacga ggcgggcggg gagctggagc 420 51 gcctcatggt cacgatgctc acggagcgcg agcgcctgct ggagacgctg cgcgaggcac 480 53 aggacgggtt ggctacagcg cagctgcggc tgcgcgagct cggccacgag aaggactcgc 540 55 tgcagcgcca gctcagcatc gcgctgcccc aggagtttgc agctctgacg aaggagctga 600 57 acttatgtcg ggagcagctg ctggagaggg aggaagagat tgcagagctg aaggcggaac 660 59 ggaacaacac geggetgete etggaacace tggagtgeet ggtgteeagg cacqagaggt 720 61 cactgcgcat gaccgtggtg aagcgccagg cccagtcccc gggtggggtc tcctcggagg 780 63 tagaagtgct caaagctcta aagtctctct tcgagcacca caaggccctg qatqaqaaqq 840 65 teegggageg getgeggatg gegetggage gegtggeagt getegaggag gagetggaae 900 67 tgagcaatca ggagactctg aaccttcgag aacagctgtc taggcggcgg tcagggctgg 960 69 aagagccggg caaggatggg gatgggcaga ctcttgccaa tggcctgggt cctggcgggg 1020 71 attecaaceg gegeacagea gagetggagg aggeeetgga geggeagege geegaggtgt 1080 73 gccagctgcg ggagcgcctg gcggtgctgt gccgtcagat gagccagctg gaggaggagt 1140 75 tgggcaccgc gcaccgtgag ctgggcaagg cagaggaagc caactccaag ctgcagcgcg 1200 77 acctcaagga ggcgctggcg cagcgggaag atatggagga gcggattaca acactggaga

1260

RAW SEQUENCE LISTING DATE: 01/03/2007
PATENT APPLICATION: US/10/660,434 TIME: 16:41:39

Input Set : F:\7570.APP

Output Set: N:\CRF4\01032007\J660434.raw

81 agaacgagti agctagcaag gagtcgttgt atcggcagag tgaaggagag agccgtcagc   1400   85 ccttgccga gatagcagca gagtcggcg agcgctgag gacgtcgaag aaagcggaga   1400   86 ccttgccga gatagcggc cagctggcg agcgctgag ggcgctcaac aaggccgagg   1500   87 aacgtcatgg gaattttgag gagcggctg gagagatgag   1620   89 atcaagagct gaatgtggag gacgagggg agaagatgaa cgatgacgaa aataagcgga   1620   91 tytccgagac gytggacaag ctgctgagag gagaagaa cgatgacaac aataagcgg   1620   91 tytccgagac gytggacaag ctgctgaagag agaagatgaa cgatgacaac atcacctgag   1620   92 agaagcttca gygtggacaag ctgctgaagag agacaccat ctcctcaa   1620   93 agaagcttca gyatgagttg ctgctaacaa aggacgacg   1620   95 agaagcttca gyatgagtg ctgtaacac actcctcaa   1620   97 tgcagatgga gatcgacca ctgcggggga ggccaccat ctcctcac aggtctctcc   1620   98 ctgcagatga gatcgacca ctgtcggggga ggccaccat ctcctca aggtctctcc   1620   101 tygatcccta tytggctggc agtggtcggg caggacagag gggccgtgg tcaggggccacc   1620   102 tugatcccta tytggctggc agtgagtcg tygccctgg gggctccata ccaccccat   1620   103 aggagagac ctccaaggat gygagcgtg tygacgtgc agacgcggg catcatgctt caggagcggc   1620   104 tygattcccc agtggagcag gtgaagtgag agaaggagaa acagaacaga	79	agcgctacct	gagcgcccag	cgggaggcca	cgtctctgca	cgacgccaac	gacaaactgg	1320
85 cittgocoga gataaggog cagotgogo agogotgog gogotcaac aaggocgagog 1500 87 aacegtoatg gaattitigaa gagogotte gogaagtoga gogoccaacta gaagaagaaga 89 atcaagagot gcagogogoc ogocagogog agaagatagaa cogatgacca aataagogoc 1620 81 tytcogagaa gytgacaaa citgotgagog agtocaacaa gogottacac aataagogoc 1680 83 agaagotta gygggoctg gaggagaaga actococtgaa cogaggagata gocaacatga 1740 85 agaagotta gyggagagat citgotgagaa actococtgaa cogaggagata gocaacatga 1740 85 agaagotta gyggagagat citgotgagaa actococtgaa cogaggagata gocaacatga 1740 87 tycagatgag gatogacoag citgogoggag agocacatc citcatecte aggitectec 1860 87 tycagatgag gatogagotg gatgatetet aggoacocac titacettet gyggocacac 1860 87 tycagatgag cotgagacte gittactet aggoacocac titacettet gyggocacac 1920 88 citgotgagagogogogogogogogogogogogogogogogo	81	agaacgagtt	agctagcaag	gagtcgttgt	atcggcagag	tgaagagaag	agccgtcagc	1380
87 aacgtcatgg gaattttgag gagcggcttc ggcagctgga ggcccagctg gaagagaaga	83	tggccgagtg	gttggacgac	gccaagcaga	agctgcagca	gacgctgcag	aaagcggaga	1440
89 atcaagaget geageggee eggeagegg agaagatgaa egatgacea aataagegge 1620 91 tytecegagae gytggacaag ettgetgage agtecaaega gegettacae etteacetea 1680 93 agaagettea gyaggacgatg agagagaaga actecettgae eggeggagata gecaacaatga 1740 95 agaagettea gyatgatte ettgetaaaea agaageaget ettegeegaa atggagega 1600 97 tyeagatgga gategaceag etgeegggga gyecaceate etcetaetee agytetetee 1860 99 etggeagtge eetggagete egttaetete aggeaceae etttaeettee gytgeecaee 1920 101 tygateceta tytggetgge agtgyteggg eageagaaga gygeegetgg teaggygge 1920 103 aggaggagee etceaaggat tygaeeetgg etgeecetge gygetecata ecaececeat 2040 105 teeetgygga actggaegge teegatgagg agaaggeaga gyggatgtt gyggeegage 2100 107 tyettyteece caatgyggaa gygaaggt etgeecetge gygetecata ecaececeat 2040 105 teeetgygga actggaegge teegatgagg agaaggeaga gyggatgtt gyggeegage 2100 107 tyettyteece caatgyggaa gygaagt teeaagaggag gaaggagaa acagaacaga 2220 108 tyggaggeea eaacaaggaga teegatgga gygaagetgg eaaceetgtg gygeegaaee 2280 109 tyggaggeea teaacaaggag ateaagetga geeegatee 2280 101 gygaagagga getggaagat eggetyteea getetggett gyaetegttg gygeegaaee 2280 111 gygaagagga getegaagat eggetyteea getetggett gyaetegttg gygeegaaee 2280 112 eceaaggate teetggaag eggetygee eaceecetag eeetgeegt gygggaeee 2280 113 ceaaggeta teaatgteet aagagagaag atggaggae 2280 114 teetggaaa gaaagaagaa gygaagaaa atggaggaa 2280 125 tetttygeaa gaaagaagaa gyaagaatgg gygeegaaee 2280 127 ettygaaacae deagagaggg teetggaag gyacgagee eaceagaggaga agaagaaga 2280 128 geecaaggaa gaagaagaa acaetygeea etgaeeetg gyggaagaaga atgagggee 2280 129 geecaaggaa acaetygga gyacgaaaga gyaagaagaa acaetygaaga 2280 129 geecaaggaa gaagaaaga gyaagaaga agaagaaga acaetygagaaga 2280 129 geecaaggaa gagaacaaga gyaagaaga gyaagagaa acaetygaaga 2280 129 geecaaggaa gagaacaaga gyaagaaga gyaagaaga 2280 129 geecaaggaa gyaagaaga agaagaaga agaagaaga 2280 129 geecaaggaa gyaagaaga agaagaaga agaagaaga 2280 129 geecaaggaa gyaagaaga agaagaaga acaaggaggaa acaaggaggaa acaaggaggaa acaaggaggaa acaaggaggaa acaaggaggaa acaaggaggaaga acaaggaggaaga acaaggaggagaa acaaggaggaagaa	85	ccttgcccga	gatagaggcg	cagctggcgc	agcgcgtggc	ggcgctcaac	aaggccgagg	1500
91 tgtccgagac ggtggacaag ctgctgaggg agtacaaga ggtgacaca aataagcgc 1620 91 tgtccgagac ggtggacaag ctgctgagcg agtccaacga gcgcttacag cttcacctca 1680 93 aggagctct ggggggctg gaggagaaga actccctgag cgaggagata gccaacatga 1740 95 agaagcttca ggatgagttg ctgctgaaga actcccttag cgagagagata gccaacatga 1740 95 agaagcttca ggatgagttg ctgctgaaga actcccttagcgaa atggagcgga 1800 97 tgcaagtaga gatcgaccag ctgcggggga ggccaccac ctttacctca aggaccacac ctcctactca caggaccacac ctccatcacac caggagcacac ctgagaggacac ctgagaggacac ctgagaggacacac ctctactcac aggaccacac tttaccttct ggtgccacc 1920 101 tggatcccta tgtggctggc agtggtcggg caggcagcggg gggccgcggg caggaggaga gggaggagaga gggcgcgtgg caggaggac cccaaggac tggagaggaga	87	aacgtcatgg	gaattttgag	gagcggcttc	ggcagctgga	ggcccagctg	gaagagaaga	1560
91 tgtccqagac ggtggacaag ctgctgacga actccatga cgagtataaga cttcaccta 1680 93 aggagcat gggggcgtg gaggagaaga actcctgag cgaggagata gccaactaa 1740 95 agaagctta ggggtggtgt ctgctaaaaa aggagcagct cttggccgaa atggagcgga 1800 97 tgcagatgga gatcgaccag ctgcggggga ggccaccatc ctcctactcc aggtctctc 1860 99 ctggaagtgc cctggagctc cgttactct aggcaccac tttaccttct ggtgccaccac 1920 101 tggatcccta tgtggctgg agtggtggg cagcaagaag gggccgctgg tcagggggac 1980 103 aggaggagca ctccaaggat tgggagcgg cagcaagaag gggccgctgg tcagggggac 2100 105 tcctgggga actggacggc tccgatagag aggaggaga ggggatgttt ggaggcgagc 2100 107 tgctgtcccc cagtgggcag tccgatagag agacgtggc catcatgctt caggagcag 2100 109 tggaggcaat caacaaggag atcaagctga tccaaggaga ggggatgttt ggagcgagc 2100 109 tggaggagaa gtggaggat cgggtgtcaa gacactgtt gaactgtt caggagcagc 220 111 gggaagagag agtgaaggat caggtgttca gactctgtt ggactgtt ga 220 112 ggagagagag agtgaagatg cccccctac cactccct 240 113 gcagcagtg ctccctgacc cccccctac cacccctac ccttgccgg cactcacct 240 115 ccagctctgg ccactcaaa ccccgctgg caccccctac ccttgccgg cactcacct 240 116 tccaggaga cacccaca cccactccc gctctgccg tcttgagag atgaccagg 250 117 acaaggctaa tcatgtcct aaggagagag tgggagct cacagggaga ggggcagcc 240 119 tcccaggaga cacccaca cccactccc gctctgccg tcttgagag atgaccagg 250 121 ccttggcact gcagggggg tccctggaag aggaggac ccaagggaa aggacggca 250 122 ccttggcact gcaggagggg aggacagggggagagggggac 250 123 ccccagagac caaggacga aggacaaga ggaacacaga aggagaac cagggacagc ctttttgga 270 125 tctttggcaa gaagagaag ggacgaatgg gaacaccagg ggggacagct tctttctctgg 270 126 tggaacac ctctagatga acactggcca ctgacggga aggacagac aagtgacag 276 127 ctggaacac cactcgatga acactggcc cactcagg gggacagac 282 128 gccaaggac cacggagac cacggagac 282 129 gcccaagga cacttgcac aggagaca 282 120 gcccaaggac cacgagaca 282 121 dcttggcac accttcacaga aggacagac 282 122 gccaaggac 282 123 gcaaggaca cccccaaga aggacaaga 282 124 gcaaggaca 282 125 acatggaca 282 126 127 ctggaaca cctccaagaca 282 128 128 129 gcccaaggac 282 120 120 120 120 120 120 120 120 120 12								1620
93 aggagcicat ggggggcttg aggagaaga actooctgag ogaggagata gccaacatga 1740 95 agaagcttca ggatgagttg otgotaaaca aggagcagot ottggcgaa atggaggga 1800 97 tgcagatgga gatogaccag otgogggga ggccaccatc otcotactco aggtototoc 1860 99 otgogatgo octgggagtc ogttactotc aggcaccac tttacettca ggtgccacac 1910 101 tggatoccat atgggctggc agtggtcggg caggcaagaga gggcgctgg traagggggac 1980 103 aggaggagcc otccaaggat tgggagcggt otgocctgg gggctccata ocaccccat 2040 105 tocotgggga actggacgg tocgatagag aggaggaga ggggatgttt gggggcgggc 2100 107 tgcttocco cagtgggcag ctggacgtgc actacatgtt caggagcagc 2100 109 tggaggcat caacaaggag atcaagctga tocaaggag gaaggagaca acagaacaga 2220 111 gggcagaagg octggagat cacccctaa ccaccccat 2280 112 gggcagaagg ctggaggtfacca gctctggtt ggactgttg ggccgctacc 2280 113 gaagaagctg otcoctgocc ocotocotca ccacctcata ccttgcagc cacccccccc 2340 115 ccagtottgg ccactcaaca occcgcttg cacccctag ccttgcagt gggggagcacg 2400 117 acaaggctaa tcatgtocct aaggagagag ctggagctc acgaggggag gggcgacac 2280 118 toccaggaga caccccaaca occactoccc gcttgccgt ttggaggag atgagcacag 2580 119 toccaggaga caccccaaca occactoccc gcttgccgt tttgagaga atgagcacag 2580 121 octtggcact gaggggggt tccttggaag atgaggaca caccccaggga atgaggaca 2580 122 octtggcaat cttttgcaacaa gcccccaaga gagaggacat cacgtactc ataggccgtc 2640 123 tottggcaac cttagaagag ggacgaatg gaccccaag ccgggacac ccagggga aggagcacc 2640 125 totttggcaa gaaagagaag ggacgaatg gacccccag cgggacacc aaggctgaca 2640 126 totttggcaa gacacgaaga acactggaga ggacgacag cccaaggaga acaccgagaa acaccagagaa acaccagaa acaccagaa agaaagaa								1680
95 tgcagatgga gatcgaccag ctgcggggga ggcaccacc ctcctactcc aggtctctcc 1860 97 tgcagatgga catcgaccag ctgcggggga ggcaccacc ttcactcc aggtctctcc 1860 99 ctgcagtgc cctggagctc cgttactctc aggcaccac tttaccttct ggtgccacc 1920 101 tggatcccta tgtggctggc agtggtcggg caggcaagag gggcgctgg tcaggggggcg 1980 103 aggaggacc ctccaaggat tgggagggg ctgccctac gggctccata ccaccccat 2040 105 tcctgggga actggacgg tccgatagag aggaggcaga ggggatgttt ggggccagac 2100 107 tgctgtcccc cagtgggaag gctgacgtgc agacgtggc catcatgctt caggagcagc 2100 109 tggagcatc acacaagagg gtgatgatgg tccaaggag agaggagcaa acagaacaga								1740
97 tgcagatgga gatcgaccag ctgcgggga ggccaccatc ctcctactcc aggtctctcc 1920 ctggcagtgc ctgtgagctc cgttactctc aggcaccac tttaccttct ggtgccacc 1920 ctgcagtgc ctgtgagctc cgttactctc aggcaccac tttaccttct ggtgccacc 1920 ctgcagtga aggaggagc ctccaaggat tgggagggc ctgccatcac cacaccaccat 2040 ctcctggga actggaggag ctcgaaggg ctgacctgg gggctcata ccacaccaca								1800
99 ctggcagtgc cttggagtc cgttactctc aggacaccac tttaccttct ggtgccacc 1920 101 tggatccta tgtggctgg agtggtcgg caggacagag gggcgctgg tcaggggcac 103 aggaggagcc ctccaaggat tgggacggt ctgccctcac caccccac 2040 105 tccctgggga actggacggc tccgatgag aggagcagag gggctcata cacccccac 107 tgctgtcccc cagtgggcag gctgacgtg aggagcaga ggggatgttt ggggccagc 108 tggaggccat caacaaggag atcaagtga tccaagagag agaggagaac acagaacaga								1860
101 tggatccta tgtggtcgc agtggtcgg caggcaaga gggccgtgg tcagggtca 1980 103 aggaggagc ctccaaggat tgggagggg ctgccctgc gggctcata ccaccccat 2040 105 tcctgggga actggacgg tccgatgag aggagcaga ggggctcata ccaccccat 2040 105 tcctgggga actggacag tccgatgag aggagcaga ggggatgtt tggggccggc 2100 107 tgctgtccc cagtgggcag gctgacgtg agacgtggc catcatgctt caggagcagc 2160 109 tggaggcat caacaaggag atcaagctga tccaagagga gaaggagaa acaagaacaga 2220 111 gggcagaagga gctggagagt cgggttca gctctggctt ggactcgttg ggccgctacc 2280 113 gcagaaggt ctccctgccc ccctcccac ccctccctac ccttgccag ccctcccctc								1920
103 aggagagac ctccaaggat tgggagcggt ctgccctgc gggctccata ccaccccat 2040 105 tccctgggga actggacgg tcggagggagaggagggagggggagggggggagggaggga								1980
107 tgctgtccc cagtgaggg gctgaggtg aggaggcaga ggggatgtt ggggcagg 2100 107 tgctgtccc cagtgaggag gctgaggtgc agacggtgg catcatgctt gaggagac 2160 109 tggaggcat caacaaggag atcaaggtg tccaagagga gaaggagaca acagaacaga								2040
109 tggaggccat caacaggag atcaagtg agacgtggc agacgtggc catcatgctt caggagcag 2210 119 tggagggcat caacaggag atcaagtgt tccaagaggag gaaggagaca acagaacaga								2100
101 tggagagaga getggagat egggtgteea getetggett ggaetetgtt ggaetetgtt ggaetetete 2280 111 ggagaagaga etetgee egggtgteea getetggett ggaetetgtt ggaetetete 2280 113 geageagatg eteetgeee eeceteeae eecetetae eetetgeege eeceteeee 2340 115 ceagetetg eeceteeee eecegeetg eaceceetag eetetgeege gagggeaeeg 2400 117 aeaagggetaa teatgteeet aaggagaag etggagetee aegaggggag gggeeggeea 2460 117 teetggaga eaceceeae eeceteeee getetgeege tettggaaga atgaeceagg 2520 121 cettggeaet geaggeggg teetggaag atgggggaee eeceagggga atgaeggegea 2580 123 ceceagatte tetgeaeaa geeeceaaga agaagagat eeaggeggaa atgagggae 2580 125 tetttggeaa gaaagagaag ggaegaatgg gaeeeeeag eegggaagae etettetetgg 2700 127 etggaaeaee eteaggaga aeaetggeea etgaageete ggggetagee aagetgaeag 2760 129 geeeaggaga eaaggaeaga aggaaeaga ggaagaeaga eacetetggag gaggeetgee 2820 131 geeagggeet aeettttget geetgggaeg ggeeaeegt ggggtagee aagetgaeag 2760 129 geeeaggagat geetgeetgg tatgtggeeg eegeeaegt ggggtagee aagetgaeag 2940 133 gggtgggaat geetgeetgg tatgtggeeg eegeeaegg ggtgteetgg etggagetge 2820 134 geeagggeet geetgeetgg tatgtggeeg eegegeagat eggeataeag aaceeggtgeea 2940 135 teatggeeaa eegegeetg geeateeag aggagaaeg eagetgaeag 2940 137 acegaeteaa eetgeeteg tatgtggeeg eegegeagat eggeataeag aaceeggtgeea 2940 138 tataggeeaa eegegeete geeateeag aggagaaega eageaggaga atggagetee 2940 139 eegeeteete eegeatee geeateeag agatggtee ggaeaaga etggaatee 2940 139 eegeeteete eegeatee geeateeag gagtggaaga eegetgagaga eegetgagagaga eegetgagagaga eegetgagaga eegetgagagaagaga								2160
111gggcagaggagctggagagtctcctgaccacctctgctcaccttctgctc2340113gcagcagctgctccctcaccacccccctcacccttgccagccctcccctc2340117acaaggctagctctctacacaccccgctggcacccctagccttgccgggaggcacg2460119tcccaggagacaccccacaccccactccccgtcttgcggtcttgagagaatggaggac2520121ccttggcacttcttggcacttcttggaagaatggaggacccccaggagaatggaggac2580123ccccagattctcttgacaaagccccaaagaaggagagacccaggtcagcatgtgaggac2640125tctttagacaacctcaagtagagacccaagaggaccccaagaaggagcacgcctttctctgg2700127ctggaacaccctcaagtagaacacttggccactgaccctctggggtatagcaaggactgac2820123gccaggggctacctttttgctgcctgggacggcctgcaggagaggcttgcc2820123gccaggggctacctttttgctgcctgggacggggccaccggctggagcttgc2820131gccaggggctaccttttgctgcctggagacgggccaccggacaggagtgtcc2820133gggtgggctgcttgctggdggagtcccggaatcaaggaggagaccggattcaga2940135tcatggccaagcttgcaggaaggaggagaccggattcagaaggaggagaccggattcagac2940137accgactacgcacactcaaacggagaacacggagagacctggattcagac2940134ttaggccacgacactgctcgaactgagagaactgggtga								2220
113 gcagcagctg ctecctgcc cectecetea cacectetae cettgecage cectecete gagggeage ceagectetag caceccetag caceccetag gagggeage gagggeage 2400 117 acaaggetaa teatgtecet aaggagaag ctgaggtee acgaggggag gggecggea 2460 119 teecaaggaga caceccacca cecactecee getetgeeeg tettgaagaa atgacecaag 2520 121 cettggeaet geaggeggg teectgaag atgagggae ceaaggggag aggagggeage 2580 123 ceceagate tetgacaaa geececaaga agaaagagaa caaggagaag aggagggeage 2760 125 tetttggeaa gaaagaagag gagaaatgg gacecceagg ggggetagee aaggetgee 2760 127 ctggaacace ctcagatgag acactggeea ctgacectet gggggetage aagetgaagg 2760 128 geecaggaga caaggacega aggaacaaga ggaagatga gaaggatge actetctggag gaggetgee 2820 131 geeagggeet acetttget geetgggaeg ggeecacegt gggtecetgg ctgagagetg 2820 133 gggtgggeat geetgeetgg tatgtggeeg cetgacecetg gggtecetgg ctgagaetgt 2880 133 gggtgggat geetgeetgg tatgtggeeg cetgaceaegt gggtecetgg ctgagaetgt 2840 135 teatggeea cetgteagae acggagate agggageae agggageae 2940 135 teatggeea cetgeagae acggagate geetaceagg aggageae acggagaag aggaggeae 2940 136 teatggeea cetgeagae ggeatecaag aggagagae acggagaga aggagagae 2940 137 acgactecae geeaacgee gagaacaagg aggagagae acacegagga atggaggeea 2940 138 teatggeea cetgeagae geatacaagga aggagagae acggagaga aggagagae 2940 139 cegectecte cegeattee acaggaaaeg aggaggaga acacegagga atggaggeea 2940 131 tatacggeae ggecaacte acaggaaaeg aggagagae acacegagaga atggaggeea 2940 132 aggacatgaa ceacgaggg gtggggaaeg actgggagaa acacegagga atggaggaea 2940 133 geaactgaa ceacgagggg gggggaaeg acgggagaaeg acggagaaga acggagaaega 2940 134 tatacggeae gggecaacte acaggaaaega gaateagaga acggagaaega 2940 137 aggactecga gggccaacte agaagagae acgggggaaegaea 2940 148 aggactega ctcaaggag tegetggggaaegaagaaegagaaegagaaegagaaegagaaegagaaegagaaegagaaegagaaegagaaegagaaegagaaegagaaegagaaegagaaegaaegaaegagaaegagaaegagaaegagaaegagaaegagaaegagaaegaaegagaaegagaaegaaegaaegagaa								2280
115 ccagctctgg ccactcaaca ccccgcctgg cacccctag ccctgcccgt gagggcaccg 2460 117 acaagggctaa tcatgtccct aaggaaggaag ctggagctcc acaggaggaag gagccggcaa 2460 119 tcccaggaga caccccacca cccactcccc gctctgccgg tcttgagaga atgacccagg 2520 121 ccttggcact gcaggcgggg tccctggaag atgagggacc cccacgggga agtgagggcac 2580 123 ccccagattc tctgcacaaa gcccccaaga agaagagcat caagtcatcc ataggccgtc 2640 125 tctttggcaa gaaagaaga ggacgaattg gacccccagg ccgggacagc tcttcttgg 2700 127 ctggaacacc ctcagatgag acactggcca ctgagcacg ccgggacagc acactgccc 2640 129 gcccaggaga caaggaccga aggaacaaga ggaagcatga actcctggaag gaggcggacg 2760 131 gccagggct accttttgct gcctggacg ggccaccgt ggtgtcctgg ctggagctgc 2820 133 gggtgggcat gcctgcctgg tatgtggcg cctgccgggc caatgtcaag agaggctgcc 2940 135 tcatggccaa cctgtcagac acggaacca acggagacc acggagacc accggagac accggcagac accggagac accggagaca accggagac accggagaca accggagaca accggagaca accggagaca accggagagac accggagaca accggagagaca accggagagaca accggagaca accggagagaca accggagagaga								2340
117 acaaggctaa tcatgtccct aaggaggaag ctggagctcc acgaggggag gggccggcca 2520 119 tcccaggaga cacccacca cccactcccc gctctgcccg tcttgagaga atgaccagg 2520 121 ccttggcact gcagggggg tccctggaag atgaggggaa atgaggggaa 2580 123 ccccagattc tctgcacaaa gcccccaaga agaagagcat ccaagtggga atgaggggaa 2580 125 tctttggcaa gaaagagag ggacgaatgg gacccccagg ccgggacagc tcttctctgg 2700 127 ctggaacacc ctcagatgag acactggca ctgacctct gggggctagcc aagtgacaga 2760 129 gcccaggaga caaggaccga aggaacaaga ggaacgaatg actctggag gggccggcc 2820 131 gccaggggct accttttgtt gcctgggacg ggccaaccgt ggtgtcctgg ctgagactgt 2880 133 gggtggcat gcctgctgg tatgtggccg cctgccgggc caatgtcaag aggagctgcc 2820 135 tcatggccaa cctgtcaga acggagatcc aggagatcc acggcataag acccccagg cgggacagac cttgagacg 2940 135 tcatggccaa cctgtcagac acggagatcc aggaggatcc cggcatcagc aacccgtgc 3000 137 accgactcaa gctacgcct gcatccagg agatcagctc gccaccagt gtgggagaag atggaggcc 2220 141 ttacggccac gaccaagccc gaaccaagg agatcagctg ggagcagatc ctggactaga acggagacc 2340 143 gcgacatgaa ccacqaaggg gtggggaacg actggggga atggaggac 2240 144 ttacggccac gaccaagcc gagaccaagg agatcagctg ggagcagatc ctggactaga 2340 145 acgcagcta cttcatggag tcgctggtgg acgctgaca 2340 147 aggagtctcg gggccaactc aagatggtgg acgctgaac 2340 148 ggattatgtg cctgaaacgg ctcaactatg accggaagga 24222 151 aaagtcagac ccagatccga gacttgatgg tgtggtccaa 23222 151 aaagtcagac ccagatccga gacttgatgg tgtggtccaa 23222222 151 aaagtcagac 2320 152 caccgagaa 422222 153 tgtccgggc gggccaagt 23222 154 acggaagga 232222 155 cactgctcgc cctggaagg 232222 156 acggaagga 23222222222222222222222222222222								2400
119 tcccagaga cacccacca cccactccc gctctgccg tcttgagag atgacccagg 2520 121 ccttggcact gcaggggg tccctggaag atgagggac cccacgggga agtgaggca 2580 123 ccccagattc tctgcacaaa gcccccaaga agaagagcat caagtcatcc ataggcgtc 2640 125 tctttggcaa gaaagagaag ggacgaatgg gacccccagg ccgggacagc tcttctctgg 2700 127 ctggaacacc ctcagatgag acactggcca ctgaccctct ggggctagcc aagctgacag 2760 129 gcccaggaga caaggacca aggaacaaga ggaagacatga actcctggag gaggcctgcc 2820 131 gccagggct accttttgct gcctgggacg ggccaccgt ggtgtcctgg ctggaagctg 2880 133 gggtgggca gcctgcctgg tatgtggcg ctgccgggc caatgtcaag agcggtgcca 2940 135 tcatggccaa cctgctcaga acggagatcc agcggagat cggcatcagc aacccgtgc 3000 137 accgactcaa gctacgcct gcaatccagg agatggtct gcgcatcagc acccgtgc 3000 138 ccgcctctc ccgcacttcc acaggaaacg tgtggtaccag acaccgctgc 3000 139 ccgcctctct ccgcacttcc acaggaaacg tgtggtagac acacggggg atggagaccc 2940 141 ttacggcca gaccaagcc gagaccaagg agatcagct ggagacgagat ctggcataatg 3180 143 gcgacatgaa ccacaggcg tgtggggaacg actggctgc cagctgggg ctgcccaat 3240 145 accgcagcta cttcatggag tcgctggtgg acgctcgaat ggtagatcac cttaacaaga 3300 147 aggagctccg gggccaactc aagatggtgg acagcttca cagggtgggt ctacacttag 3360 149 ggattatgtg cctgaacgg ccaaacgg tgtgtccaa tgaggggggg agggggaag 3420 151 aaagtcagac ccaagaccg agactgagg tgtggtccaa tgaggggggg agggggggggg								2460
121 ccttggcact gcaggcggg tccctggaag atgggggac cccaeggga agtgaggca 2580 123 ccccagattc tctgcacaaa gcccccaaga agaaggcat caagtcatcc ataggccgt 2640 125 tctttggcaa gaaagagaag ggacgaatgg gacccccaag ccgggacaagc tcttctctgg 2700 127 ctggaacacc ctcagatgaa acactggcca ctgaccctt ggggctagcc aagctgacag 2760 129 gcccaggaga caaggaccga aggaacaaga ggaagcatga actcctggag gaggcctgcc 2820 131 gccagggcat accttttgct gcctgggacg ggccaccett ggggttctgg ctggagctg 2880 133 gggtgggcat gcctgcctgg tatgtggccg cctgccgggc caatgtcaag agcggtgcca 2940 135 tcatggccaa cctgtcagac acggagatcc agcgcagaat cggcatcaag agcggtgcca 2940 137 accgactcaa gctacgcctc gccatccag agatggtctc gcctacagcc 2940 138 ccgcctcctc ccgcacttcc acaggaaacg tgtggatgac acacggagag atggagtccc 3120 139 ccgcctcctc ccgcacttcc acaggaaacg tgtggatgac acacggagag atggagtccc 3120 141 ttacggccac gaccaagcc gagaccaaga agatcagct ggagacagat ctgcacatag 3120 143 gcgacatgaa ccacgagtgg gtggggaacg actggctggc cagcctgggg ctgccccaat 3240 145 accgcagcta cttcatggag tcgtggggaacg acgcttgag ggagagaga cttaactatg 3360 147 aggagctccg gggccaactc aagatggtg acagcttca cagggtgag ctgccccaat 3240 148 accgcagcta cttcatggag tcgctggtgg acagcttca cagggtgag atggaggaag 3420 151 aaagtcagac ccagaaccga gacgtgatgg tgtggtccaa tgaggtggg agggggagag 3420 153 tgtccgggt gggccagaa gacttcgac accgaagga acctcagggg ggacagagg 3420 155 cactgctcgc cctggacaga gacttcgact accgaaccagg gggagaaggaggggaaggaggggagagaggagagagaccccagagacccagagaccccagagacccagagacccagagaccccagagacccagagaccccagagacccagagaccagagaccccagagacccagagacccagagacccagagaccccagagaccccagagacccagagaccccagacccagagaccccagagaccccagacccagagaccccagagaccccagacccagagaccccagacccagacccagacccagaccccagaccagacccagacccagacccagaccagaccccagaccacagaccccagaccagaccccagaccacaccac								2520
123 ccccagattc tetgcacaaa gccccaaga agaagagcat caagtcatec ataggccgtc 2700 127 ctggaacacc ctcagatgag gaacgaatgg gaccccaag ccggacagc tettectegg 2700 127 ctggaacacc ctcagatgag acactggcca ctgaccetct ggggctagcc aagctgacag 2760 129 gcccaggaga caaggaccga aggaacaaga ggaagcatga actcctgag gaggcctgcc 2820 131 gccagggcct accttttgct gcctgggacg ggccaccgt ggtgtcctgg ctggagctgt 2880 133 gggtggcat gcctgctgg tatgtggccg cctgccgggc caatgtcaag agcggtgcca 2940 135 tcatggccaa cctgtcagac acggagatcc agcgcgagat cggcatcagc acccgtgc 3000 137 accgactcaa gctacgcct gccatccagg agatgctc gccacctcg cctcacgcc 3060 139 ccgcctcctc ccgcacttcc acaggaaacg tgtggatgac acaccgaggag atgggtccc 3120 141 ttacggccac gaccaagcc gagaccaagg agatcagctg ggagacagat ctggcatatg 3180 143 gcgacatgaa ccacaggtgg gtggggaacg acctggcgc cagctgggg ctgcccaat 3240 145 accgcagcta cttcatggag tcgctggtgg acgcttca cagggagat cttacataga 3300 147 aggagctccg gggccaacct aagatggtgg acagcttca cagggtggg cttacactat 3360 147 aggactccg gggccaacct aagatggtgg acaccttca cagggtggg accggggaga 3420 151 aaagtcagac ccagatccga gaatttgca cgaacctcac ggagagggggggggg								2580
125 tetttggeaa gaaagagaag ggacgaatgg gacceccagg eeggacage tettetetgg 2700 127 etggaacace etcagatgag acactggea etgaccetet ggggetagee aagetgacag 2760 129 geecaggaga caaggacega aggaacaaga ggaagcatga actettgeg gaggeetgee 2820 131 geeaggeet acettttget geetggaceg ggeecacegt ggtgteetgg etgagetgte 2880 133 gggtgggeat geetgeetgg tatgtggeeg eetgeeggge caatgeeag ageggtgeea 2940 135 teatggeaa eetgeete geeateeag aggagatee aggegagat eggeateag aceeggtgee 2940 137 acegacteaa getacgeete geeateeag agatggtee ggeeateag agegggtgeea 3000 137 acegacteae geeacgeete geeateeag agatggtee ggeeateag agatggtee 2940 139 eegeeteete eegeactee geeateeag agatggtee eggeateag agatggeed 2940 141 ttaeggeea gaccaagee ggggaacaag agatggtee etggaatgag atggagtee 3120 141 ttaeggeea gaccaageg gtggggaacg acgeetggg etggeetggg etggeeatatg 3180 143 gegacatgaa eetgagtgg tegetggtg acagettee etggeetggg etgeecaat 2340 145 acegeageta etteatggag tegetggtg acagettee eageetggg etgeecaat 3360 149 ggattatgtg eetgaacgg etcaactag acegegagaga eetggggggggggggggggggggggggggg								2640
127 ctggaacacc ctcagatgag acactggcca ctgaccett ggggctagcc aagctgacag 2760 129 gcccaggaga caaggaccga aggaacaaga ggaagcatga actcttggag gaggcctgcc 2820 131 gccagggcct accttttgct gcctgggacg gggccaccgt ggtgtcctgg ctggagctgt 2880 133 gggtgggcat gctgcctgg tatgtggccg cctgccgggc caatgtcaag agcggtgcca 2940 135 tcatggccaa cctgcagac acggagatcc agcgcagact cggcatcagc aacccgctgc 3000 137 accgactcaa gctacgcct gcatccagg agatggtct gctcacctcg ccctcagccc 3060 139 ccgcctcctc ccgcacttcc acaggaaacag tgtggatgac acacgaggag atggagtcc 3120 141 ttacggcca gaccaagccc gagaccaagg agatcagct ggagcagatc ctggcatatg 3180 143 gcgaactgaa ccacgagtgg gtggggaacg accgctggc cagctgggg ctgccccaat 3240 145 accgcagcta cttcatggag tcgctggtgg accgctcgac gggactagac cttaacaaga 3300 147 aggagctccg gggccaactc aagatggtgg acagcttca cagggtggg acggctggag cttaacattatg 3360 149 ggattatgtg cctgaaacgg ctcaactatg accgcgaagga cctggagggg aggcgggaag 3420 151 aaagtcagac ccagatccga gacttgacc accgagagga cctgggggggggg								2700
129 gcccaggaga caaggaccga aggaacaaga ggaagcatga actcctggag gaggcctgcc 2820 131 gccagggcct accttttgct gcctggagcg ggcccaccgt ggtgtcctgg ctggagctgt 2880 133 gggtgggcat gcctgctgg tatgtggccg cctgccgggc caatgtcaag agcggtgcca 2940 135 tcatggccaa cctgtcagac acggagatcc aggagggcc cggcatcagc acccgctgc 3000 137 accgactcaa gctaccgctc gccatcacgg agatggtctc gctcacctcg ccctcagccc 3060 139 ccgcctcctc ccgcacttcc acaggagaacg tgtgggatga acacggggag atggagtccc 3120 141 ttacggccac gaccaagccc gagaccaagg agatcagctg ggagcagatc ctggcatatg 3180 143 gcgacatgaa ccacgagtgg gtggggaacg actggctgcc cagcctgggg ctgccccaat 3240 145 accgcagcta cttcatggag tcgctggtgg acagcttca cagggtggg ctgccccaat 3300 147 aggagctccg gggccaactc aagatggtgg acagctttca cagggtgag ctacactatg 3360 149 ggattatgtg cctgaaacgg ctcaactatg accggaagga ctgggggag 3420 151 aaagtcagac ccagatcga gacgtgatgg tgtggtccaa tgagggggg ggagcgggag 3420 153 tgtccgggct gggcctgaag gaatttgcca cgaacctcac ggagagggg gtacacgggg 3480 155 cactgctcgc cctggacga accttcgact actccgact ggccttgctc ctgcagagg 3540 156 cactgctcgc cctggacga accttcgact actccgact ggccttgctc ctgcagagg 3540 157 ccacgcagaa tgcacaggcc cggcagcttc tggagaagga attcagcac cttactcct 3660 159 taggcacaga caggcgctg gacgaggaca gcgccaagtc tttcagccac cttactcct 3720 161 ggcggaagat gttccggaga aaggacctcc gaggcgtaac tcccgactca gctgagatgt 3780 163 tgcccccaa ctttcgttcg gctgcaaggg gagccctggg ctccccaggg ctcccccac 3720 161 ggcggaagat gttccggaga aaggacctcc gaggcgtaac tcccgactca gctgagatgt 3780 163 tgcccccaa ctttcgttcg gctgcaggg gagccctggg ctccccgggg ctcccccaccc 3720 161 ggcggaagat gttccggaga cagactcc gaggcgtaac tcccgaacg ctcccccaccc 3720 161 ggcggaagat gttccggaga gacgactcc gagggctgg gcccaggc gccagacgg ctcccccaccc 3720 162 gaagctgga gccagagg cagactcca ggagactga ggaggggga gaactccc 3900 163 tgcccccaa cttcgttcg gccagcagg gagacctcca ggagacgg gagacctgg gccagacgg gccagacgg gccagacgg cagacggc gccagacgg gccagacgg gagacctccc 3900 165 gaagctgga cccaaacgc cagactcca ggagactcca tcggagaga gaatctccc 3900 167 ggacctattc ctgctagtg accatctga ctgggcggaga gagacggaga gagacggga accat								2760
131 gccagggcct accttttgct gcctgggacg ggcccaccgt ggtgtcctgg ctggagctgt 2880 133 gggtgggcat gcctgctgg tatgtggcg cctgccgggc caatgtcaag agcggtgcca 2940 135 tcatggccaa cctgtcagac acggagatcc agcgcagat cggcatcagc acccgctgc 3000 137 accgactcaa gctacgcctc gccatccagg agatgtcct gctcacctcg ccctcagccc 3060 139 ccgcctcctc ccgcacttcc acaggaaacg tgtggatgac acacgaggag atggagtccc 3120 141 ttacggccac gaccaagcc gagaccaagg agatcagctg ggagagatc ctggcatatg 3180 143 gcgacatgaa ccacgagtgg gtggggaacg actggctgc cagcctgggg ctgcccaat 3240 145 accgcagcta cttcatggag tcgctggtgg acgctcgaat gttagatcac cttaacaaga 3300 147 aggagtccg gggccaactc aagatggtgg acagctttca cagggtgagt ctacattatg 3360 149 ggattatgtg cctgaaacgg ctcaactatg accggaagga cctgagggggaag 3420 151 aaagtcagac ccagaaccga gacttggac gaactcaca ggagagggggggggg								2820
133 gggtggcat gcctgctgg tatgtggcg cctgccgggc caatgtcaag agcggtgca 2940 135 tcatggcaa cctgtcagac acggagatcc agcgcgagat cggcatcagc aacccgctgc 3000 137 accgactcaa gctacgcctc gccatccagg agatggtctc gctcacctcg ccctcagccc 3060 139 ccgcctcctc ccgcacttcc acaggaaacg tgtggatgac acacgaggag atggagtccc 3120 141 ttacggcaac gaccaaggcc gaggacaagg agatcagctg ggagcagatc cttggcatatt 3180 143 gcgacatgaa ccacgagtgg gtggggaacg acgctcgaat ggtagcacac cttggcatatt 3240 145 accgcagcta cttcatggag tcgctggtgg acgctcgaat gttagatcac cttaacaaga 3300 147 aggagctccg gggccaactc aagatggtgg acacttca cagggtgagt ctacattatt 3360 149 ggattatgtg cctgaaacgg ctcaactatg accggaagga cctggaggg aggcgggaag 3420 151 aaagtcagac ccagatccga gaccttaga gaccttcac cgaacctcac ggagagagggggggggg								2880
135 tcatggccaa cctgtcagac acggagatcc agcgcagat cggcatcagc aacccgctgc 3000 137 accgactcaa gctacgcctc gccatccagg agatggtctc gctcacctcg ccctcagccc 3060 139 ccgcctcctc ccgcacttcc acaggaaacg tgtgggatgac acacgaggag atggagtccc 3120 141 ttacggccac gaccaagccc gagaccaagg agatcagctg ggagcagatc ctggcatatg 3180 143 gcgacatgaa ccacgagtgg gtggggaacg actggctgcc cagcctgggg ctgcccaat 3240 145 accgcagcta cttcatggag tcgctggtgg acgctcgaat gttagatcac cttaacaaga 3300 147 aggagctccg gggccaactc aagatggtgg acagctttca cagggtgagt ctacattatg 3360 149 ggattatgtg cctgaaacgg ctcaactatg accggaagga cctggagggg agggggaag 3420 151 aaagtcagac cagatccga gacttgatg tgtggtccaa tgagcggggg agggggaag 3480 153 tgtccgggct gggcctgaag gaatttgcca cgaacctcac ggagagcggg gtacacgggg 3540 155 cactgctcgc cctggacgag accttcgact actccgacct ggccttgctc ctgcagatcc 3600 157 ccacgcagaa tgcacaggcc cggcagctc tggagaagga attcagcaac cttatccct 3720 161 ggcggaagat gttccgggag aaggagcacc gagggctaac tcccgaactca gctgagatgt 3780 163 tgcccccaa ctttcgttcg gctgaaggac aggcctagg ctcccaggacgg ctgcagagtg 3780 165 gcaagctgca gccagaaggc cagacttct ggagttcccg ggcagactca ctcccatcct 3720 166 gcaagctgca gccagaaggc cagacttct ggagttcccg gccagactca gctgagatgt 3780 167 ggacctattc ctgctagtg aggcctcag gtgacctcac tcggacgga gaatcttccc 3840 168 gcaagctgca gccagaaggc cagacttctg ggagttcccg gccagacgc gtttcggtcc 3900 167 ggacctattc ctgctagtgc aggcctcag ctgtggcctc gccgggaga gaactttccc 3960 169 gaggctgggc tgttccctct cctgcccgga ctgtggcctc gccggggaga gcgggggggg 4020 171 gagctcgcc cgaggactgg accatctgta cagaccagc ggagtgcgc cgcccgcctc 4080 173 gcacagggcc ggggcctgga ccaaaccaca tgaactggac tgaactggg aagaagggg aagaagggg 4140								2940
137 accgacteaa getacgeete gecatecagg agatggtete geteaceteg ceeteageee 3060 139 cegeeteete eegeacttee acaggaaaeg tgtggatgae acaegaggag atggagteee 3120 141 ttaeggeeae gaccaageee gagaceaagg agateagete ggagcagate etggeatatg 3180 143 gegacatgaa eeacgagtgg gtggggaaeg actggetgee eageetgggg etgeeeaat 3240 145 accgeageta etteatggag tegetggtgg acgetegaat gttagateae ettaacaaga 3300 147 aggageteeg gggeeaaete aagatggtgg acagetteea eagggtgagt etacattatg 3360 149 ggattatgtg eetgaaaegg eteaaetatg aceggaagga eetggaggggaag 3420 151 aaagteagae eeagateega gaettgeea eggaaegeea eetgaggggaag 3480 153 tgteeggget gggeetgaag gaatttgeea egaaceteae ggagageggg tacaaegggg 3540 155 caetgetege eetggaegag acettegaet acteegaeet ggeettgete etgeagatee 3600 157 eeacgagaa tgeacaggee eggeagette tggagaagga atteageaae ettaeteet 3660 159 taggeaagat gteeggggg gaegagggaga agggeggaga aggaggggg agggggagaga geggggaga egggggagag egggeggaga egggeggaga geggggagaga egggggagagae geggggagagaga								3000
139 ccgcctcctc ccgcacttcc acaggaaacg tgtgggtgac acacgaggag atggagtccc 3120 141 ttacggccac gaccaagcc gagaccaagg agatcagctg ggagcagatc ctggcatatg 3180 143 gcgacatgaa ccacgagtgg gtggggaacg actggctgc cagcctgggg ctgccccaat 3240 145 accgcagcta cttcatggag tcgctggtgg acgctcgaat gttagatcac cttaacaaga 3300 147 aggagctccg gggccaactc aagatggtgg acagcttca cagggtgagt ctacattatg 3360 149 ggattatgtg cctgaaacgg ctcaactatg accggaagga cctggagcgg aggcgggaag 3420 151 aaagtcagac ccagatccga gacgtgatgg tgtggtccaa tgagcgggt atgggttggg 3480 153 tgtccgggct gggcctgaag gaatttgcca cgaacctcac ggagagcggg gtacacgggg 3540 155 cactgctcgc cctggacgag accttcgact actccgacct ggccttgctc ctgcagatcc 3600 157 ccacgcagaa tgcacaggc cggcagcttc tggagaagga attcagcaac cttatctcct 3660 159 taggcacaga caggcggtg gacgaggaca gcgccaagtc tttcagccgc tccccatcct 3720 161 ggcggaagat gttccgggag aaggacctcc gaggcgtaac tcccgacca gctgagatgt 3780 163 tgcccccaa ctttcgttcg gctgcagcgg gagccctggg ctcccctccc								3060
141 ttacggccac gaccaagcc gagaccaagg agatcagctg ggagcagatc ctggcatatg 143 gcgacatgaa ccacgagtgg gtggggaacg actggctgc cagcctgggg ctgccccaat 3240 145 accgcagcta cttcatggag tcgctggtgg acgctcgaat gttagatcac cttaacaaga 3300 147 aggagctccg gggccaactc aagatggtgg acagctttca cagggtgagt ctacattatg 3360 149 ggattatgtg cctgaaacgg ctcaactatg accggaagga cctggaggg aggcgggaag 3420 151 aaagtcagac ccagatccga gacgtgatgg tgtggtccaa tgagcggg aggcgggaag 3480 153 tgtccgggct gggcctgaag gaatttgcca cgaacctcac ggagagcggg gtacacgggg 3540 155 cactgctcgc cctggacgag accttcgact actccgacct ggccttgctc ctgcagatcc 3600 157 ccacgcagaa tgcacaggc cggcagcttc tggagaagga attcagcaac cttatctcct 3660 159 taggcacaga caggcggtg gacgaggaca gcgccaagtc tttcagccg tccccatcct 3720 161 ggcggaagat gttccgggag aaggacctcc gaggcgtaac tcccgaccta gctgagatgt 3780 163 tgcccccaa ctttcgttcg gctgcagcgg gagccctggg gagccctggg ctccctctcc 3840 165 gcaagctgca gccagaaggc cagacttctg ggagttcccg ggcagacggc gtttcggtcc 3900 167 ggacctattc ctgctagtgc aggcctcaa gtgacctcac tcggacggaa gaatcttccc 3900 167 ggacctattc ctgctagtgc aggcctcaa gtgacctcac tcggacggaa gaatcttccc 3960 171 gagctcgcc cgaggactgg accatctgta cagaccaca tgaaccaggg gagtgcgcg cgcccgcctc 4080 173 gcacagggcc gggggcctgga ccaaaccaca tgaaccaca tgaaccaggg aagaagggg aagaagggg 4140								3120
143 gcgacatgaa ccacgagtgg gtggggaacg actggctgc cagcctgggg ctgccccaat 3240 145 accgcagcta cttcatggag tcgctggtgg acgctcgaat gttagatcac cttaacaaga 3300 147 aggagctccg gggccaactc aagatggtgg acagctttca cagggtgagt ctacattatg 3360 149 ggattatgtg cctgaaacgg ctcaactatg accggaagga cctggagcgg aggcgggaag 3420 151 aaagtcagac ccagatccga gacgtgatgg tgtggtccaa tgagcgggt atgggttggg 3480 153 tgtccgggct gggcctgaag gaatttgcca cgaacctcac ggagagcggg gtacacgggg 3540 155 cactgctcgc cctggacgag accttcgact actccgacct ggccttgctc ctgcagatcc 3600 157 ccacgcagaa tgcacaaggcc cggcagcttc tggagaagga attcagcaac cttatctcct 3660 159 taggcacaga caggcggtg gacgaggaca gcgccaagtc tttcagccgc tccccatcct 3720 161 ggcggaagat gttccgggag aaggacctcc gaggcgtaac tcccgactca gctgagatgt 3780 163 tgcccccaa ctttcgttcg gctgcagcgg gagccctggg ctcccctccc								3180
145 accgcagcta cttcatggag tcgctggtgg acgctcgaat gttagatcac cttaacaaga 3300 147 aggagctccg gggccaactc aagatggtgg acagctttca cagggtgagt ctacattatg 3360 149 ggattatgtg cctgaaacgg ctcaactatg accggaagga cctggagcgg aggcgggaag 3420 151 aaagtcagac ccagatccga gacgtgatgg tgtggtccaa tgagcgggtc atgggttggg 3480 153 tgtccgggct gggcctgaag gaatttgcca cgaacctcac ggagagcggg gtacacgggg 3540 155 cactgctcgc cctggacgag accttcgact actccgacct ggccttgctc ctgcagatcc 3600 157 ccacgcagaa tgcacaggcc cggcagcttc tggagaagga attcagcaac cttatctcct 3660 159 taggcacaga caggcggtg gacgaggaca gcgccaagtc tttcagccgc tccccatcct 3720 161 ggcggaagat gttccgggag aaggacctcc gaggcgtaac tcccgactca gctgagatgt 3780 163 tgcccccaa ctttcgttcg gctgcagcgg gagccctggg ctctccgggg ctccctccc 3840 165 gcaagctgca gccagaaggc cagacttctg ggagttcccg ggcagacggc gtttcggtcc 3900 167 ggacctattc ctgctagtgc aggcctcaa gtgacctcac tcggacggaa gaatcttccc 3960 169 gaggctgggc tgttccctct cctgcccgga ctgtggcctc gccggggag agcggggg 4020 171 gagctcgcc cgaggactgg accatctgta cagaccagcg ggagtgcgc cgcccgcctc 4080 173 gcacagggcc ggggcctgga ccaaaccaca tgaactggac tgagagggg aagaagggg 4140								3240
147 aggageteeg gggeeaacte aagatggtg acagettea cagggtgagt etacattatg 3360 149 ggattatgtg eetgaaacgg eteaactatg aceggaagga eetggggeggaag 3420 151 aaagteagae eeagateega gaegtgatgg tgtggteeaa tgagegggte atgggttggg 3480 153 tgteegget gggeetgaag gaatttgeea egaaceteae ggagageggg gtacaegggg 3540 155 caetgetege eetggaegag acettegaet aeteegaeet ggeettgete etgeagatee 3600 157 ceaegeagaa tgeaeaggee eggeagete tggagaagga atteageaae ettateteet 3660 159 taggeaeaga eaggeggetg gaegaggaea gegeeaagte ttteageege teeceateet 3720 161 ggeggaagat gtteegggag aaggaeetee gaggegtaae teeegaetea getgagatgt 3780 163 tgeeeceaa etttegtteg getgeagegg gageeetggg eteeeeggg eteeeteee 3840 165 geaagetgea geeagaagge eagaettetg ggagtteeeg ggeagaegge gttteggtee 3900 167 ggaeetatte etgetagtge aggeeteeag gtgaeeteae teggaeggaa gaatetteee 3960 169 gaggetggge tgtteeetet eetgeeegga etgtggeete geegggggg 4020 171 gagetegege egaggaetgg aceatetgta eagaeeageg ggagtgegeg egeeegeete 4080 173 geaeagggee ggggeetgga eeaaaeeaea tgaaetggae tgagagggg aagaagggg 4140								3300
149 ggattatgtg cctgaaacgg ctcaactatg accggaagga cctggagcgg aggcgggaag 3420 151 aaagtcagac ccagatccga gacgtgatgg tgtggtccaa tgagcgggtc atgggttggg 3480 153 tgtccgggct gggcctgaag gaatttgcca cgaacctcac ggagagcggg gtacacgggg 3540 155 cactgctcgc cctggacgag accttcgact actccgacct ggccttgctc ctgcagatcc 3600 157 ccacgcagaa tgcacaggc cggcagcttc tggagaagga attcagcaac cttatctcct 3660 159 taggcacaga caggcggctg gacgaggaca gcgccaagtc tttcagccgc tccccatcct 3720 161 ggcggaagat gttccgggag aaggacctcc gaggcgtaac tcccgactca gctgagatgt 3780 163 tgcccccaa ctttcgttcg gctgcagcgg gagccctggg ctctccgggg ctccctctcc 3840 165 gcaagctgca gccagaaggc cagacttctg ggagttcccg ggcagacggc gtttcggtcc 3900 167 ggacctattc ctgctagtgc aggcctcag gtgacctcac tcggacggaa gaatcttccc 3960 169 gaggctggc tgttccctct cctgcccga ctgtggcctc gccggggaga gcgggcgggg 4020 171 gagctcgcc cgaggactgg accatctgta cagaccagcg ggagtgcgcg cgcccgctc 4080 173 gcacagggcc ggggcctgga ccaaaccaca tgaactggac tgagagggg aagaagcggg								3360
151 aaagtcagac ccagatccga gacgtgatgg tgtggtccaa tgagcgggtc atgggttggg 3480 153 tgtccgggct gggcctgaag gaatttgca cgaacctcac ggagagcggg gtacacgggg 3540 155 cactgctcgc cctggacgag accttcgact actccgacct ggccttgctc ctgcagatcc 3600 157 ccacgcagaa tgcacaggcc cggcagcttc tggagaagga attcagcaac cttatctcct 3660 159 taggcacaga caggcggctg gacgaggaca gcgccaagtc tttcagccgc tccccatcct 3720 161 ggcggaagat gttccgggag aaggacctcc gaggcgtaac tcccgactca gctgagatgt 3780 163 tgcccccaa ctttcgttcg gctgcagcgg gagccctggg ctctccgggg ctccctccc 3840 165 gcaagctgca gccagaaggc cagacttctg ggagttcccg ggcagacggc gtttcggtcc 3900 167 ggacctattc ctgctagtgc aggcctcag gtgacctcac tcggacggaa gaatcttccc 3960 169 gaggctgggc tgttccctct cctgcccga ctgtggcctc gccggggaga gcgggcgggg 4020 171 gagctcgcgc cgaggactgg accatctgta cagaccagcg ggagtgcgcg cgcccgcctc 4080 173 gcacagggcc ggggcctgga ccaaaccaca tgaactggac tgagagggg aagaagcggg								3420
153 tgtccggct gggcctgaag gaatttgcca cgaacctcac ggagagcggg gtacacgggg 3540 155 cactgctcgc cctggacgag accttcgact actccgacct ggccttgctc ctgcagatcc 3600 157 ccacgcagaa tgcacaggc cggcagcttc tggagaagga attcagcaac cttatctcct 3660 159 taggcacaga caggcggctg gacgaggaca gcgccaagtc tttcagccgc tccccatcct 3720 161 ggcggaagat gttccgggag aaggacctcc gaggcgtaac tcccgactca gctgagatgt 3780 163 tgcccccaa ctttcgttcg gctgcagcgg gagcctggg ctctccgggg ctccctctcc 3840 165 gcaagctgca gccagaaggc cagacttctg ggagttcccg ggcagacggc gtttcggtcc 3900 167 ggacctattc ctgctagtgc aggcctccag gtgacctcac tcggacggaa gaatcttccc 3960 169 gaggctggc tgttccctct cctgcccgga ctgtggcctc gccggggaga gcgggcgggg 4020 171 gagctcgccc ggaggactgg ccaaaccaca tgaactggac tgagagggg aagaagcggg 4140								3480
155 cactgctege cetggaegag acettegaet acteegaet ggeettgete etgeagatee 3600 157 ceaegeagaa tgeaeaggee eggeagette tggagaagga atteageaae ettateteet 3660 159 taggeaeaga caggeggetg gaegaggaea gegeeaagte tteeageege teeceateet 3720 161 ggeggaagat gtteeggag aaggaeetee gaggegtaae teeegaetea getgagatgt 3780 163 tgeeeeeaa etttegtteg getgeagegg gageeetggg eteeeeteee								3540
157 ccacgcagaa tgcacaggc cggcagcttc tggagaagga attcagcaac cttatctcct 3660 159 taggcacaga caggcggctg gacgaggaca gcgccaagtc tttcagccgc tccccatcct 3720 161 ggcggaagat gttccgggag aaggacctcc gaggcgtaac tcccgactca gctgagatgt 3780 163 tgcccccaa ctttcgttcg gctgcagcgg gagccctggg ctccccgggg ctcccctctcc 3840 165 gcaagctgca gccagaaggc cagacttctg ggagttcccg ggcagacggc gtttcggtcc 3900 167 ggacctattc ctgctagtgc aggcctccag gtgacctcac tcggacggaa gaatcttccc 3960 169 gaggctgggc tgttccctct cctgcccgga ctgtggcctc gccggggaga gcgggcgggg 4020 171 gagctcgcgc cgaggactgg accatctgta cagaccagcg ggagtgcgcg cgcccgcctc 4080 173 gcacagggcc ggggcctgga ccaaaccaca tgaactggac tgagagggg aagaagcggg								3600
159 taggcacaga caggcggctg gacgaggaca gcgccaagtc tttcagccgc tccccatcct 3720 161 ggcggaagat gttccgggag aaggacetcc gaggcgtaac tcccgactca gctgagatgt 3780 163 tgcccccaa ctttcgttcg gctgcagcgg gagccctggg ctccccgggg ctccctctcc 3840 165 gcaagctgca gccagaaggc cagacttctg ggagttcccg ggcagacggc gtttcggtcc 3900 167 ggacctattc ctgctagtgc aggcctccag gtgacctcac tcggacggaa gaatcttccc 3960 169 gaggctgggc tgttccctct cctgcccgga ctgtggcctc gccggggaga gcgggcgggg 4020 171 gagctcgcgc cgaggactgg accatctgta cagaccagcg ggagtgcgcg cgcccgcctc 4080 173 gcacagggcc ggggcctgga ccaaaccaca tgaactggac tgagagggg aagaagcggg								3660
161ggcggaagatgttccgggagaaggacctccgaggcgtaactcccgactcagctgagatgt3780163tgcccccaactttcgttcggctgcagcgggagccctgggctctccggggctccctctc3840165gcaagctgcagccagaaggccagacttctgggagttcccgggcagacggcgtttcggtcc3900167gagcctattcctgctagtgcaggcctccaggtgacctcactcggacggaagaatcttccc3960169gaggctgggctgttccctctcctgcccggactgtggcctcgccggggagagcgggcgggg4020171gagctcgcccgaggactggaccatctgtacagaccagcgggagttgcgcgcgcccgcctc4080173gcacagggccggggcctggaccaaaccacatgaactggactgagaggggaagaagggg4140								3720
163tgcccccaactttcgttcggctgcagcgggagccctgggctctccggggctccctctc3840165gcaagctgcagccagaaggccagacttctgggagttcccgggcagacggcgtttcgtc3900167ggacctattcctgctagtgcaggcctccaggtgacctcactcggacggaagaatcttccc3960169gaggctgggctgttccctctcctgcccggactgtggcctcgccggggagagcgggcgggg4020171gagctcgcccgaggactggaccatctgtacagaccagcgggagttgcgcgcgcccgctc4080173gcacagggccggggcctggaccaaaccacatgaactggactgagaggggaagaagggg4140								3780
165gcaagetgcagccagaaggccagacttetgggagttecegggcagaeggcgttteggtec3900167ggacetatteetgetagtgcaggeetecaggtgaceteaeteggaeggaagaatetteee3960169gaggetgggctgtteceteteetgeeggaetgtggeetegeeggggagagegggegggg4020171gageteggeegaggaetggaccatetgtaeagaecagegggagtgegegegeeggeggg4080173gcacagggecggggeetggaecaaaccacatgaaetggactgagaggggaagaageggg4140								3840
167 ggacctattc ctgctagtgc aggcctccag gtgacctcac tcggacggaa gaatcttccc3960169 gaggctgggc tgttccctct cctgcccgga ctgtggcctc gccggggaga gcgggggggg4020171 gagctcgcgc cgaggactgg accatctgta cagaccagcg ggagtgcgcg cgcccgcctc4080173 gcacagggcc ggggcctgga ccaaaccaca tgaactggac tgagaggggg aagaagcggg4140								3900
169 gaggetggge tgttccctct cctgcccgga ctgtggcctc gccggggaga gcgggcgggg4020171 gagctcgcgc cgaggactgg accatctgta cagaccagcg ggagtgcgcg cgcccgcctc4080173 gcacagggcc ggggcctgga ccaaaccaca tgaactggac tgagaggggg aagaagcggg4140								3960
171 gagctcgcgc cgaggactgg accatctgta cagaccagcg ggagtgcgcg cgcccgcctc 4080 173 gcacagggcc ggggcctgga ccaaaccaca tgaactggac tgagaggggg aagaagcggg 4140								4020
173 gcacagggcc ggggcctgga ccaaaccaca tgaactggac tgagaggggg aagaagcggg 4140								4080
								4200

RAW SEQUENCE LISTING DATE: 01/03/2007 PATENT APPLICATION: US/10/660,434 TIME: 16:41:39

Input Set : F:\7570.APP

Output Set: N:\CRF4\01032007\J660434.raw

179 181 183 185 187 189 191 193 196 197 198	99999999999999999999999999999999999999	cegea tteet gecac gtee gtee eeggg aggg cacte 0 > SI 1 > LI 2 > TY	atg of the state o	cgggggtestegetestestege	gagag teege etee eeeeggg tgggg gagg eaegg : 2 267	gg ct aa ag cc cg gg gg ag aa ga go	tgete ggagg geege gtgte ggtag atect eeete aaaga	cceto gggag cgtco ctcgf ggggg tcttf cgcco agaao	e eed g ggg e ggt e gto g ego e eed e eed	ettti gggad eeged eegad aegad gaetd	ttcc ctcg cggt gggg atgg tgcc	tgcc ctgc cctc cgct gctg	ccagi ctaca ccggg cacca ctcca gggcg	teg ( aag ( gtc a gcc ( cct ) gac (	cgggg cctcg atctg ccccg tctcg	cctccc gcccaa gccccc gcgggc gtgctg ctctgg cctagg	4260 4320 4380 4440 4500 4560 4620 4680 4716
						Gly	Gly	Pro	Gln	Arg	Pro	Ser	Arg	Ser	Gln	Arg	
203		_		_	5	-	_			10			J		15	-	
206	Arg	Gly	Ala	Arg	Ala	Ser	Val	Gly	Asp	Arg	Ala	Pro	Gly	Leu	Arg	Ser	
207	_	_		20	_	_	_	_	25			_		30	_	_	
	Asp	Arg		GIY	Pro	Arg	Pro		Pro	Gly	Ala	Pro		Gly	Pro	Pro	
211	Thr	Pro	35 Pro	Hic	Val	Pro	Pro	40 21 a	בומ	Gln	T.011	Δνα	45 Pro	Gln	Pro	Pro	
215		50	110	1110	vai	110	55	AIG	nια	GIII	пец	60	110	GIII	FIO	FIO	
	Arg		Arg	Gln	Ala	Arg		Ala	Ala	Met	Met		Glu	Val	Met	Pro	
219	_		_			70					75	-				80	
	Thr	Ile	Ser	Glu	Asp	Gly	Arg	Arg	Gly	Ser	Ala	Leu	Gly	Pro	Asp	Glu	
223					85					90					95		
	Ala	Gly	Gly		Leu	Glu	Arg	Leu		Val	Thr	Met	Leu		Glu	Arg	
227	Glu	λνα	T.011	100	Glu	Thr	Ton	7.20	105	ת 1 ת	Cln	7 an	Clyr	110	Ala	Thr	
231	Giu	Arg	115	пси	Giu	1111	пец	120	Giu	Ата	GIII	ASP	125	шеu	AIA	1111	
	Ala	Gln		Arg	Leu	Arg	Glu		Gly	His	Glu	Lys		Ser	Leu	Gln	
235		130		_		_	135		-			140	-				
		Gln	Leu	Ser	Ile	Ala	Leu	Pro	Gln	Glu		Ala	Ala	Leu	Thr	Lys	
	145	_	_	_	_	150			_	_	155	_		<b>_</b>		160	
242	GIu	Leu	Asn	Leu	Cys 165	Arg	GIu	GIn	Leu		Glu	Arg	Glu	Glu	Glu	Ile	
	Δla	Glu	T.e.11	T.vc		Glu	Ara	Δen	Δen	170	Δra	T.011	T.011	T.011	175 Glu	Wie	
247	2114	014	Dea	180	mu	Ora	n. g	ASII	185	1111	ALG	Dea	Dea	190	Giu	1115	
	Leu	Glu	Cys		Val	Ser	Arg	His		Arq	Ser	Leu	Arq		Thr	Val	
251																	
	Val		Arg	Gln	Ala	Gln		Pro	Gly	Gly	Val	Ser	Ser	Glu	Val	Glu	
255		210	_		_	_	215	_				220	_		_	_	
258 259		Leu	ьуs	Ala	Leu	Lys 230	Ser	Leu	Phe	GIu		His	Lys	Ala	Leu		
		Lvs	Val	Ara	Glu		Leu	Ara	Met	Δla	235	Glu	Δτα	₩a1	Ala	240 Val	
263	U2 U	_ <sub>1</sub> .	· u 1	9	245	y	Leu	nr 9	4-1C-C	250	Leu	GIU	A-9	vaı	255	VAI	
	Leu	Glu	Glu	Glu		Glu	Leu	Ser	Asn		Glu	Thr	Leu	Asn	Leu	Arg	
267				260					265					270			
270	Glu	Gln	Leu	Ser	Arg	Arg	Arg	Ser	Gly	Leu	Glu	Glu	Pro	Gly	Lys	Asp	

RAW SEQUENCE LISTING DATE: 01/03/2007
PATENT APPLICATION: US/10/660,434 TIME: 16:41:39

Input Set : F:\7570.APP

Output Set: N:\CRF4\01032007\J660434.raw

271			275					280					285			
274	Gly	Asp	Gly	Gln	Thr	Leu	Ala	Asn	Gly	Leu	Gly	Pro	Gly	Gly	Asp	Ser
275		290					295					300	_	_		
278	Asn	Arg	Arg	Thr	Ala	Glu	Leu	Glu	Glu	Ala	Leu	Glu	Arg	Gln	Arg	Ala
279	305					310					315		_		_	320
282	Glu	Val	Cys	Gln	Leu	Arg	Glu	Arg	Leu	Ala	Val	Leu	Cys	Arg	Gln	Met
283			_		325	_		_		330			-	_	335	
286	Ser	Gln	Leu	Glu	Glu	Glu	Leu	Gly	Thr	Ala	His	Arg	Glu	Leu	Gly	Lys
287				340				•	345			_		350	•	-
290	Ala	Glu	Glu	Ala	Asn	Ser	Lys	Leu	Gln	Arq	Asp	Leu	Lys	Glu	Ala	Leu
291			355				-	360		J	-		365			
294	Ala	Gln	Arg	Glu	Asp	Met	Glu	Glu	Arg	Ile	Thr	Thr	Leu	Glu	Lys	Arq
295		370	_		_		375		_			380			-	_
298	Tyr	Leu	Ser	Ala	Gln	Arg	Glu	Ala	Thr	Ser	Leu	His	Asp	Ala	Asn	Asp
	385					390					395		_			400
302	Lys	Leu	Glu	Asn	Glu	Leu	Ala	Ser	Lys	Glu	Ser	Leu	Tyr	Arq	Gln	Ser
303	_				405				•	410			-	-	415	
306	Glu	Glu	Lys	Ser	Arg	Gln	Leu	Ala	Glu	Trp	Leu	Asp	Asp	Ala	Lys	Gln
307			_	420	_				425	-		-	-	430	-	
310	Lys	Leu	Gln	Gln	Thr	Leu	Gln	Lys	Ala	Glu	Thr	Leu	Pro	Glu	Ile	Glu
311	_		435					440					445			
314	Ala	Gln	Leu	Ala	Gln	Arg	Val	Ala	Ala	Leu	Asn	Lys	Ala	Glu	Glu	Arg
315		450				_	455					460				_
318	His	Gly	Asn	Phe	Glu	Glu	Arg	Leu	Arg	Gln	Leu	Glu	Ala	Gln	Leu	Glu
319	465					470	_		_		475					480
322	Glu	Lys	Asn	Gln	Glu	Leu	Gln	Arg	Ala	Arg	Gln	Arg	Glu	Lys	Met	Asn
323					485					490				_	495	
326	Asp	Asp	His	Asn	Lys	Arg	Leu	Ser	Glu	Thr	Val	Asp	Lys	Leu	Leu	Ser
327				500					505					510		
330	Glu	Ser	Asn	Glu	Arg	Leu	${\tt Gln}$	Leu	His	Leu	Lys	Glu	Arg	Met	Gly	Ala
331			515					520					525		•	
334	Leu	Glu	Glu	Lys	Asn	Ser	Leu	Ser	Glu	Glu	Ile	Ala	Asn	Met	Lys	Lys
335		530					535					540				
338	Leu	Gln	Asp	Glu	Leu	Leu	Leu	Asn	Lys	Glu	Gln	Leu	Leu	Ala	Glu	Met
	545					550					555					560
342	Glu	Arg	Met	Gln	Met	Glu	Ile	Asp	Gln	Leu	Arg	Gly	Arg	Pro	Pro	Ser
343					565					570					575	
346	Ser	Tyr	Ser	Arg	Ser	Leu	Pro	Gly	Ser	Ala	Leu	Glu	Leu	Arg	Tyr	Ser
347				580					585					590		
350	Gln	Ala	Pro	Thr	Leu	Pro	Ser	Gly	Ala	His	Leu	Asp	Pro	Tyr	Val	Ala
351			595					600					605			
354	Gly		Gly	Arg	Ala	Gly	Lys	Arg	Gly	Arg	Trp	Ser	Gly	Val	Lys	Glu
355		610					615					620				
	Glu	Pro	Ser	Lys	Asp		Glu	Arg	Ser	Ala	Pro	Ala	Gly	Ser	Ile	Pro
	625					630					635					640
	Pro	Pro	Phe	Pro	Gly	Glu	Leu	Asp	Gly	Ser	Asp	Glu	Glu	Glu	Ala	Glu
363					645					650					655	
	Gly	Met	Phe	Gly	Ala	Glu	Leu	Leu		Pro	Ser	Gly	Gln		Asp	Val
367				660					665					670		

RAW SEQUENCE LISTING DATE: 01/03/2007 PATENT APPLICATION: US/10/660,434 TIME: 16:41:39

Input Set : F:\7570.APP

Output Set: N:\CRF4\01032007\J660434.raw

370 Gln Thr Leu Ala Ile Met Leu Gln Glu Gln Leu Glu Ala Ile Asn Lys 374 Glu Ile Lys Leu Ile Gln Glu Glu Lys Glu Thr Thr Glu Gln Arg Ala 378 Glu Glu Leu Glu Ser Arg Val Ser Ser Ser Gly Leu Asp Ser Leu Gly 382 Arg Tyr Arg Ser Ser Cys Ser Leu Pro Pro Ser Leu Thr Thr Ser Thr 386 Leu Ala Ser Pro Ser Pro Pro Ser Ser Gly His Ser Thr Pro Arg Leu 390 Ala Pro Pro Ser Pro Ala Arg Glu Gly Thr Asp Lys Ala Asn His Val 394 Pro Lys Glu Glu Ala Gly Ala Pro Arg Gly Glu Gly Pro Ala Ile Pro 398 Gly Asp Thr Pro Pro Pro Thr Pro Arg Ser Ala Arg Leu Glu Arg Met 402 Thr Gln Ala Leu Ala Leu Gln Ala Gly Ser Leu Glu Asp Gly Gly Pro 406 Pro Arg Gly Ser Glu Gly Thr Pro Asp Ser Leu His Lys Ala Pro Lys 410 Lys Lys Ser Ile Lys Ser Ser Ile Gly Arg Leu Phe Gly Lys Lys Glu 414 Lys Gly Arg Met Gly Pro Pro Gly Arg Asp Ser Ser Ser Leu Ala Gly 418 Thr Pro Ser Asp Glu Thr Leu Ala Thr Asp Pro Leu Gly Leu Ala Lys 422 Leu Thr Gly Pro Gly Asp Lys Asp Arg Arg Asn Lys Arg Lys His Glu 426 Leu Leu Glu Glu Ala Cys Arg Gln Gly Leu Pro Phe Ala Ala Trp Asp 430 Gly Pro Thr Val Val Ser Trp Leu Glu Leu Trp Val Gly Met Pro Ala 434 Trp Tyr Val Ala Ala Cys Arg Ala Asn Val Lys Ser Gly Ala Ile Met 438 Ala Asn Leu Ser Asp Thr Glu Ile Gln Arg Glu Ile Gly Ile Ser Asn 442 Pro Leu His Arg Leu Lys Leu Arg Leu Ala Ile Gln Glu Met Val Ser 446 Leu Thr Ser Pro Ser Ala Pro Ala Ser Ser Arg Thr Ser Thr Gly Asn 450 Val Trp Met Thr His Glu Glu Met Glu Ser Leu Thr Ala Thr Thr Lys 454 Pro Glu Thr Lys Glu Ile Ser Trp Glu Gln Ile Leu Ala Tyr Gly 458 Asp Met Asn His Glu Trp Val Gly Asn Asp Trp Leu Pro Ser Leu 462 Gly Leu Pro Gln Tyr Arg Ser Tyr Phe Met Glu Ser Leu Val Asp 466 Ala Arg Met Leu Asp His Leu Asn Lys Lys Glu Leu Arg Gly Gln

POST

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 01/03/2007 PATENT APPLICATION: US/10/660,434 TIME: 16:41:40

Input Set : F:\7570.APP

Seq#:66; N Pos. 2320,2321,2336,2351,2363,2413,2723,2724,2725,2726,3730

Output Set: N:\CRF4\01032007\J660434.raw

## Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

```
Seq#:232; N Pos. 46,90,158,204,328,379,406,407,447,459,468,479,487,490,518
Seg#:232; N Pos. 519,529,534,536,541,544,545,552,556,561,567,568,569,572
Seq#:232; N Pos. 575,579,586,589
Seq#:241; N Pos. 433,471
Seq#:310; N Pos. 83
Seq#:334; N Pos. 18,38,45,55,116,121,123,132,210,217,222,590,1653,1780,1794
Seq#:335; Xaa Pos. 41
Seq#:348; N Pos. 18,38,45,55,116,121,123,132,210,217,222,590,1653,1780,1794
Seq#:349; Xaa Pos. 41
Seq#:396; N Pos. 52,140,233,234,340,353,363,367,441,521
Seq#:398; Xaa Pos. 40
Seq#:403; N Pos. 18,38,45,55,116,121,123,132,210,217,222,590,1653,1780,1794
Seq#:404; Xaa Pos. 41
Seq#:405; N Pos. 83
Seq#:424; N Pos. 611,612,625
Seq#:514; N Pos. 263
Seq#:515; N Pos. 77,79,188,269,277,282,295
Seq#:516; N Pos. 259
Seq#:517; N Pos. 305,377,388,395
Seq#:521; N Pos. 140,300
Seq#:523; N Pos. 6
Seq#:525; N Pos. 45,50,67,192,195,210,338,344,368
Seq#:526; N Pos. 79,442
Seq#:527; N Pos. 224,294,298,306,333,354,360,368,376,380,386
Seq#:529; N Pos. 404,473
Seq#:530; N Pos. 12,349
Seq#:531; N Pos. 263
Seq#:532; N Pos. 77,79,188,269,277,282,295
Seq#:533; N Pos. 259
Seq#:534; N Pos. 305,377,388,395
Seq#:537; N Pos. 156,181
Seq#:542; N Pos. 248,404,416
Seq#:543; N Pos. 503
Seq#:546; N Pos. 340,367,375,380
Seq#:548; N Pos. 253,307,330
Seq#:596; N Pos. 570
Seq#:605; N Pos. 498
Seq#:653; N Pos. 442,492,493,495,498,499,500,526,535,544,553,557,558,560
Seq#:653; N Pos. 561,564,566,573,574
Seq#:699; N Pos. 451,457,463,469,477,482,527,568,582,587,609,632,663,682
Seq#:700; N Pos. 2,3,4,5,6,7,8,9,10,11,12,13,14,15,17,18,19,20,21,22,23,24
Seq#:700; N Pos. 25,26,27,34,36,39,70,440,441,467,501,525,533,540,559,560
Seq#:700; N Pos. 561,562,563,564,565,566,567,568,570,571,576,579,589,590
```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 01/03/2007 PATENT APPLICATION: US/10/660,434 TIME: 16:41:40

Input Set : F:\7570.APP

Output Set: N:\CRF4\01032007\J660434.raw

Seq#:700; N Pos. 591,592,593,594,595,596,597,599,600,601,602,606,609,610
Seq#:700; N Pos. 613,619,620,621,622,623,624,625,626,627,628,629,630,631
Seq#:700; N Pos. 633,634,636,637,638,641,645,646,647,648,649,650,651,652
Seq#:700; N Pos. 653,654,655,656,657,658,659,660,661,662,663,664,665,666
Seq#:700; N Pos. 667,668,669,670,671,673,674,675,676,677,678,679,680,681
Seq#:700; N Pos. 682,683,684,685,686,687,688,689,690,691,692,693,694,695
Seq#:700; N Pos. 696,697,698,699,700,701,702,703,704,705,706,707,708,709

## VERIFICATION SUMMARY DATE: 01/03/2007 PATENT APPLICATION: US/10/660,434 TIME: 16:41:40

Input Set : F:\7570.APP

Output Set: N:\CRF4\01032007\J660434.raw

L:5890 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 after pos.:2280 M:341 Repeated in SeqNo=66 L:28916 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:232 after pos.:0 M:341 Repeated in SeqNo=232 L:29838 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:241 after pos.:420 L:38527 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:310 after pos.:60 L:41776 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:334 after pos.:0 M:341 Repeated in SeqNo=334 L:41859 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:335 after pos.:32 L:43077 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:348 after pos.:0 M:341 Repeated in SeqNo=348 L:43160 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:349 after pos.:32 L:48433 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:396 after pos.:0 M:341 Repeated in SeqNo=396 L:48513 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:398 after pos.:32 L:49089 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:403 after pos.:0 M:341 Repeated in SeqNo=403 L:49172 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:404 after pos.:32 L:49250 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:405 after pos.:60 L:53083 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:424 after pos.:600 L:61505 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:514 after pos.:240 L:61556 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:515 after pos.:60 M:341 Repeated in SeqNo=515 L:61585 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:516 after pos.:240 L:61625 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:517 after pos.:300 M:341 Repeated in SeqNo=517 L:61712 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:521 after pos.:120 M:341 Repeated in SeqNo=521 L:61756 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:523 after pos.:0 L:61836 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:525 after pos.:0 M:341 Repeated in SeqNo=525 L:61870 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:526 after pos.:60 M:341 Repeated in SeqNo=526 L:61953 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:527 after pos.:180 M:341 Repeated in SeqNo=527 L:62010 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:529 after pos.:360 M:341 Repeated in SeqNo=529 L:62034 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:530 after pos.:0 M:341 Repeated in SeqNo=530 L:62071 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:531 after pos.:240 L:62122 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:532 after pos.:60 M:341 Repeated in SeqNo=532 L:62151 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:533 after pos.:240 L:62191 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:534 after pos.:300 M:341 Repeated in SeqNo=534 L:62255 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:537 after pos.:120 M:341 Repeated in SeqNo=537 L:62372 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:542 after pos.:240 VERIFICATION SUMMARY

DATE: 01/03/2007

PATENT APPLICATION: US/10/660,434

TIME: 16:41:40

Input Set : F:\7570.APP

Output Set: N:\CRF4\01032007\J660434.raw

M:341 Repeated in SeqNo=542

L:62409 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:543 after pos.:480